

Answer Key

1. 1

2. 4

3. 3

4. 1

5. 2

6. 30

7. 2

8. -1

9. 10

10. 6

$$11. \quad \begin{array}{r} \frac{9}{12} \\ + \frac{2}{12} \\ \hline \frac{11}{12} \end{array}$$

$$12. \quad \begin{array}{r} 5\frac{4}{24} \\ + \frac{3}{24} \\ \hline 5\frac{7}{24} \end{array}$$

$$13. \quad \begin{array}{r} 1\frac{9}{24} \\ - \frac{16}{24} \\ \hline \frac{17}{24} \end{array}$$

$$14. \quad \begin{array}{r} 4\frac{15}{20} \\ - 1\frac{6}{20} \\ \hline 3\frac{9}{20} \end{array}$$

$$15. \quad \begin{array}{r} \frac{9}{12} \\ + \frac{10}{12} \\ \hline \frac{19}{12} = 1\frac{7}{12} \end{array}$$

$$16. \quad \begin{array}{r} \frac{26}{42} \\ - \frac{9}{42} \\ \hline \frac{17}{42} \end{array}$$

$$17. \quad \begin{array}{r} \frac{38}{70} \\ + \frac{70}{70} \\ \hline 1\frac{17}{70} \end{array}$$

$$18. \quad \begin{array}{r} 3\frac{9}{24} \\ - \frac{4}{24} \\ \hline 3\frac{5}{24} \end{array}$$

$$19. \quad \begin{array}{r} 1\frac{3}{24} \\ - \frac{20}{24} \\ \hline \frac{7}{24} \end{array}$$

$$20. \quad \begin{array}{r} 2\frac{35}{80} \\ - \frac{4}{80} \\ \hline 2\frac{31}{80} \end{array}$$

$$21. \quad \begin{array}{r} \frac{21}{48} \\ + \frac{15}{48} \\ \hline \frac{36}{48} \end{array}$$

$$22. \quad \begin{array}{r} \frac{4}{30} \\ + \frac{1}{30} \\ \hline \frac{5}{30} = \frac{1}{6} \end{array}$$

$$23. \quad \begin{array}{r} 5\frac{16}{30} \\ - 5\frac{5}{30} \\ \hline \frac{11}{30} \end{array}$$

$$24. \quad 2\frac{3}{5} - 1\frac{2}{3} = \frac{14}{15}$$

$$25. \quad \begin{array}{r} \frac{9}{12} \\ + \frac{2}{12} \\ \hline \frac{11}{12} \end{array}$$

$$26. \quad \begin{array}{r} \frac{2}{25} \\ + \frac{10}{25} \\ \hline \frac{12}{25} \end{array}$$

$$27. \quad 21\frac{5}{12} - 11\frac{2}{3} = 9\frac{9}{12} = 9\frac{3}{4}$$

28. 44

29. 45

30. 115

31. $3 \times 4 = 12$ (cost of 3 binders)

$20 - 12 = 8$ (cost of pencils)

$8 \div 4 = \$2$ (a pencil)

32. $2 \times 2 = \$4$ (change)

33. $4 \times 4 = 16$

$3 \times 2 = 6$

$6 + 16 = \$22$

34. $3 \times (80 \div 40) = \6

35. $3 \times (100 \div 40) = \7.50

36. $10 - (5 \times 0.69 + 3 \times 0.29 + 1.88 \times 1) = \3.80

37. $1.5 \times 16 = 24$

$24 \div 2 = \underline{12}$

38. $\frac{1}{3} \times 21 + 3 = \underline{\$10}$

39. $\frac{1}{2} \times 1200 \times 2 + \frac{1}{4} \times 1200 \times 3 = 1200 + 900$

$= \underline{2100}$

40. N

$1\frac{1}{2} + \frac{1}{2} + 1\frac{3}{4} = 3\frac{3}{4}$ hr

$6:00 + 3:45 = 9:45$

41. $\frac{20}{120} = \frac{1}{6} = 1/6$

42. $\frac{30}{120} = \frac{1}{4} = 1/4$

43. $\frac{5}{8} \times 12 = 7.5$ million

44. $12 \times \frac{1}{3} = 4$

$12 + 4 = \underline{\$16}$

45. $20 \times \frac{1}{4} = 5$

$20 - 5 = \$15$

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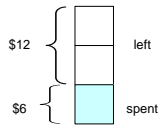
46. $(4\frac{1}{4} + 5 + 6\frac{5}{8}) - (5 + 2\frac{1}{3} + 8\frac{1}{4})$
 $= (\frac{1}{4} + \frac{5}{8}) - (\frac{1}{3} + \frac{1}{4})$
 $= \frac{7}{24} = 7/24 \text{ hr}$

47. $\frac{1}{5}(4\frac{1}{4} + 2\frac{1}{2} + 5 + 4\frac{3}{4} + 3\frac{1}{2})$
 $= \frac{1}{5}(20)$
 $= 4 \text{ hrs}$

48. 8 hours and 45 minutes
 $3\frac{1}{2} + 5\frac{1}{4}$
 $= 8\frac{3}{4} \text{ hours}$
 $= 8 \text{ hrs \& } 45 \text{ min.}$
 $(\frac{1}{4} \text{ hour is } 15 \text{ minutes})$

49. 10 sec = $\frac{1}{3}$ of 30 sec.
 $\frac{1}{3}(600,000) = \$200,000$

50. $6 \times 3 = 18$



51. 0.034

52. 8

53. $\frac{2}{3}$

54. $\frac{13}{20} = 13/20$

55. $104\frac{1}{12} = 104 \frac{1}{12}$

$$\begin{array}{r} 3\frac{2}{3} \\ + 100\frac{5}{12} \\ \hline 103\frac{13}{12} = 104\frac{1}{12} \end{array}$$

56. $\frac{25}{9} = (\frac{5}{3})^2 = (1\frac{2}{3})^2$
 $a = 2$

56. $\frac{25}{9} = (\frac{5}{3})^2 = (1\frac{2}{3})^2$
 $a = 2$

57. 12449

58. 7
 $1^2 = 1, 2^2 = 4, \dots, 7^2 = 49$

59. $30 \div 2.5 = 12 \text{ packets}$

60. $3 \times 10 = 30 \text{ (total)}$
 $30 - (10 + 12) = 8 \text{ years old (Charlie)}$

61. D

62. $80 \div 4 = 20$
 $20^2 = 400 \text{ ft}^2$
 $10^2\pi = 314 \text{ ft}^2$
 $400 - 314 = 86 \text{ ft}^2$

63. $401 \div 5 = 80 \text{R}1$
 $R = 1$

64. $\frac{1}{2} \times 6 \times 12 = 36$
 $6 \times 6 = 36$
 $x = 6$

65. $40\% \times 20 = .4 \times 20 = 8$

66. $720 \div 12 = 60$
 $60 + 50 + 50 = 160$

67. C
 Nancy: 46 sec
 Jennifer: 45 sec
 Alex: 50 sec
 Joy: 45.8 sec

68. $24 \div 3 = 8 \text{ rows}$
 $15 \div 3 = 5 \text{ columns}$
 $8 \times 5 = 40 \text{ (plates)}$

69. $14 \div 3\frac{1}{2} = 4$

70. $12 \div \frac{1}{3} = 36$

71. $(\frac{3}{2})^2 = \frac{9}{4} = 2.25$

72. 2

73. $\frac{1}{10} = 1/10$

74. 0.007

75. $\frac{60}{16} = \frac{15}{4} = 3\frac{3}{4} = 3 \frac{3}{4} \text{ (lb)}$

76. 24

77. 4

78. 2.25

79. $x = 4$

80. $2\frac{1}{2} - 1\frac{2}{3} = 2\frac{3}{6} - 1\frac{4}{6} = \frac{5}{6} = 5/6$

81. 24

82. 203%

83. 5

84. 6

85. $\frac{1}{2}(25)(10) = 125 \text{ in}^2$

86. $20 \times 14 - 16 \times 10 = 280 - 160 = 120$

87. $\frac{1}{2} \times (20 \times 10) = 100$

88. $20 \times \frac{1}{4} = 5$
 $20 + 5 = 25$

89. (a) $32 \times \frac{3}{4} = 24 \text{ (D)}$
 b) $5 \times 24 = 120 \text{ (J)}$

90. $65 \times 3 - 55 = 140$
 $140 \div 2 = 70 \text{ lb}$